

FORM MR-1 (Revised November 1984)

DIVISION OF OIL, GAS & MINING

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS AND MINING

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

1 Telephone: (801) 538-5340

Ospy, Original was returned for changes

NOTICE OF INTENTION TO COMMENCE MINING OPERATIONS and MINING AND RECLAMATION PLAN

Based on Provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, General Rules and Regulations and Rules of Practice and Procedures, By Order of the Board of Oil, Gas and Mining.

Mine Name: Utelite	Mine Plan Date:
File No.: ACT/043/004	
Operator:	DOGM Lead Reviewer:
Mineral(s) to be Mined:	Shale
Please attach other sh numbers when used.	eets as needed and include cross-reference page
 Name of Applicant or C Corporation () Partn 	Ompany: Utelite Corporation ership () Individual ()
2. Address: Permanent:	P.O. Box 387
Temporary:	Coalville, Utah 84017
Company Representative	Name: Carsten N. Mortensen
Address:	Title: General Manager Phone: (801) 359-8541
4. Location of Operation: Township(s): 1-South Township(s): Township(s):	
5. Owner(s) of record of	the surface area within the land to be affected:
Name:	SEE ATTACHED SHEETS Address: Address:
Name:	Address: Address:

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6. Owner(s) of r	ecord of the miner	rals to be mined:
Name: Name: Name:		Address: Address: Address: Address:
Owner(s) of r any part of t	ecord of all other the land to be affe	r minerals, including oil and gas, within ected:
Name:		Address:
Name:		Address: Address:
9.7 Have you or a you received Operations by	any other person, p an approval of a N the State of Utab	partnership or corporation associated with Notice of Intention to Commence Mining h for operations other than described yes, list all approval numbers now under
	rator's legal rich	
10. Source of Ope land to be co	overed by this Noti	ht to enter and conduct operations on the ice:
10. Source of Ope land to be co	overed by this Noti	ice:
ll. Give the name	es and mailing addr	resses of every principal Executive, Offic a similar function) of Applicant:
ll. Give the name	es and mailing addr person performing a	Tesses of every principal Sucception Office.

Has the Applicant, any subsidiary or affiliate or any person, partnership, association, trust or corporation controlled by or under common control with the Applicant, or any person required to be identified by Item 11 ever had an approval of a Notice of Intention to Mine or Explore withcrawn or has surety relating thereto ever been forfeited? () Yes, () No. If yes, please explain:

Please note: Section 40-8-13 of the Act provides that information relating to the location, size or nature of the deposit, and marked confidential by the Operator, shall be protected as confidential information by the Board and the Division and not be a matter of public record in the absence of a written release from the Operator, or until the mining operation has been terminated as provided in Subsection (2) of Section 40-8-21 of the Act. This material should be so marked and included on separate cross-referenced sheets.

- 13. All maps and plans prepared for submission shall be of adequate scale and detail to show topographic features and clearly indicate the following
 - Location and delineation of the extent of the land previously A. affected, as well as the proposed surface disturbance.
 - В. Existing active or inactive, underground or surface mined areas. C.
 - Boundaries of surface properties, including ownership. D.
 - Names and locations of:
 - (1) Lakes, rivers, streams, creeks and springs.
 - (2) Roads, highways and buildings.
 - (3) Active or abandoned facilities.
 - (4) Transmission lines within 500 feet of the exterior limits of land affected.
 - (5) Gas and/or oil pipelines.
 - (6) Site elevation.
 - E. Drainage patterns of land affected:
 - (1) Overburden or topsoil removal and storage areas.
 - (2) Areas susceptible to erosion.
 - (3) Natural waterways.
 - (4) Constructed drainages, diversions, berms and sediment poncs (design calculations shall be included).
 - (5) Receiving waters (State Health classification).
 - (6) Directional flow of all surface waters (indicated by arrows). F. Known drill holes:
 - (1) Location.
 - (2) Status.

			Depths and thicknesses of:* a. Water bearing strata. b. Mineral deposits.	
			c. Toxic or potentially toxic materials.	*
			d. Surficial or plant supporting material (topsoil and subsoil).	
	G.	Locat	tions of disposal and stockpile areas:	
		(1)	Topsoil and subsoil storage areas.	
		(2)	Overburden storage area.	
		(3)	Waste, tailings, rejected materials.	
		(4)	Raw ore stockpile(s).	
		(6)	Tailings-ponds and other sediment control structures. Discharge points, water effluents (see #15[D]).	
reco	eral :	refere aea wi	should have a color code or other suitable legend used in clearly indicate surface features of the land affected. A ence map completed on a 7.5 (1:24,000) USGS quadrangle sheet ith additional large scale maps included for practical deline facilites, (e.g., 1:200, 1:500).	
14.	Acre	age to	o be disturbea:	
	Α.	Mines etc.)	site (operating, storage, disposal areas,	
	В.		ss/haul roads/conveyors:	
	C.	Assoc	ciated on-site processing facilities:	
15.	Desc	ribe m	mining method to be employed, including:	
	Α.		ng sequence: Map delineating the yearly sequential disturbance (if surfamine) and/or surficial disturbance.	ce
		(2)	Narrative (including on-site processing or mineral treatmen	t):

cross reference to page number here:

Attach supplemental sneets and/or diagrams as necessary with

^{*}Stratigraphic or lithologic logs if correlated to footage depths may be presented when labeled (maps or logs should be labeled confidential, if so desired).

	В.	<pre>If sedimentary deposit seam(s): (1) Thickness(es):</pre>						
		(2) Dip:						
	c.	(3) Outcrop:						
	C. Will any underground workings or aquifers be encountered? (() No. If yes, describe potential impacts and protection me to be taken:							
	D.	Describe any active discharge or proposed discharge of water from mine or site area. Include water quality data and lab test reports. If attached sheets or reports are included, cross reference to page number here:						
	_							
16.	Have will	all necessary water rights been appropriated? () Yes, () No. How water be obtained? Please explain:						
17.	MITIT	osed or estimated duration of mining operation: the permit term be for a lesser amount of time, subject to review? ., for surety estimate reasons). () Yes, () No. If yes, how long?						
18.	M.	ribe the construction and maintenance of access roads including: Procedures (drainage and erosion control methods). Cross section(s). Profile(s) of proposed road grade(s).						
1								
	Atta here	ch supplemental diagrams and cross reference to page number						
19.		r land use(s): ent land use(s):						
		ible projected or prospective future land use(s):						
		- State of bracksonie (deate faile ose(2):						

20.	Desc	ribe methods of tree and brush removal:
	Prov	ide estimate of, and method of obtaining existing vegetation cover (%):
	What	types of dominant vegetation are present?
	Phot	ographs and/or maps may be attached to these forms, cross reference to number here:
21.	suit acco anal exca	s (surficial plant supportive material) and overburden: Except where e or rocky terrain make it impossible, all surficial materials able as a growth medium shall be removed, segregated and stockpiled rding to its ability to support vegetation (as determined by soil ysis and/or practial revegetation experience) prior to any major vation. (Suggested minimum requirements are the top six inches, or "A" horizon, whichever is larger.)
	Α.	What is the pH range of the soil before mining? Name of person or agency and method of determining pH:
	в.	Attach lab report if available. Cross reference page number here: Average depth of topsoil and subsoil to be stripped and stockpiled: Calculated volume of soil to be stockpiled:
	c.	Describe the method for removing and stockpiling topsoil and subsoil, including measures to protect topsoil from wind and water erosion, compaction and pollutants:
	D.	Describe the method for removing and stockpiling overburden. Describe and discuss the acidity or alkalinity (pH) or other characteristics which would affect revegetation:

E.	Rock subjected to processing such as waste rock, tailings, etc., and which is to be disposed of on- or off-site must be
	which is to be disposed of on- or off-site must be subjected to a toxicity analysis. The method of determination
	toxicity analysis The method of the must be subjected to a
	disposal methods must be explained in detail, including means for
	Containment and less be explained in detail, including means for
	containment and long range stability*:
	A COLOR OF THE PROPERTY OF THE

- 22. Describe the methods used to minimize public safety and welfare hazards during and after mining operations including:
 - A. Shaft, tunnel and drill hole closure.
 - B. Disposal of trash, scrap metal and wood and extraneous debris, waste oil and solvents, unusable buildings and foundations, sewage and other materials incident to mining.
 - C. Posting of appropriate warning signs and/or fences or berms to act as barriers (e.g., above highwalls) in locations where public access is available.

^{*&}quot;Toxic" means any chemical or biological or adverse characteristic of the material involved which could reasonably be expected to negatively affect ecological or hydrological systems or could be hazardous to the public safety and welfare.

Α.	Attach pre- and postmining contour cross sections, typical of regrading designs. Cross reference to page number here:
В.	Describe the method(s) of overburden replacement and stabilization and highwall elimination, including: (a) slope factors; (b) lift heights; (c) compaction; (d) terracing, etc., (e) also include testing procedures:
c.	What method of spreading topsoil and subsoil or upper norizon material on the regraded area will be employed?
c.	l. Indicate the approximate depth of soil cover after final
С.	material on the regraded area will be employed?
c.	1. Indicate the approximate depth of soil cover after final surfacing inches. 2. What tests will be performed to adequately evaluate the potential of the soil to successfully support intended

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5.	Describe	methods	which m	nay be	particularly	applicable	to waste
	disposal	areas d	etermine	ed to	be potential	problem area	S.

D. Describe plans for either leaving or reclaiming the roads and pads associated with the operation.

24. Impoundments: All evaporation, tailings and sediment ponds; spoil piles, fills, pads and regraded areas shall be self-draining and nonimpounding when abandoned unless previously approved as an impounding facility by a lawful state or federal agency. In view of this, please describe the reclamation of all related areas in the operation and include pertinent items enumerated in C, 1-5 above.

25. Revegetation plans:

A. What organization, agency or person will specifically be performing the revegetation?

B. Will the affected area be subject to livestock or wildlife grazing?

() Yes, () No. Will vegetation protection be needed to allow for a determination of the successful revegetation criteria outlined in the Mined Land Reclamation Act, Rule M-10(12)? () Yes, () No. If yes, what measures will the operator take?

C.	Will	irrigation	be	used? () Yes,	() No.	Type:	
				For how	long?				_

Test plots initiated during the early stages of mine development D. provide good bases from which a successful revegetation program can be adapted for later implementation. Will test plots be employed? () Yes, () No. If yes, describe on an additional sheet(s) and attach. Cross reference page number here and show location on facilities map:

Please attach a revegetation plan and schedule including:

Species to be used.

2. Rate of seed application/acre.

3. Season to be planted.

Seedbed preparation techniques. 4.

Planting location, slope face direction, variability, method of application, covering, etc.

Mulch and fertilizer application, if used.

- Describe any other maintenance procedures which may be used, if F. needed, to guarantee successful revegetation:
- 26. Please provide a reclamation schedule including:
 - A. Estimated time for construction.
 - Estimated time for interim reclamation. В.

Estimated duration of the mining operation. C.

- A time table for the accomplishment of each major step in the reclamation plans. Attach the schedule and cross reference to the page number here:
- 27. A surety guarantee must be provided for the mining operation (see Rule M-5 Mined Land Reclamation Act). In calculating this amount, the Division will consider the following major steps based on the information provided in this report:
 - Clean up and removal of structures.

Backfilling, grading and contouring. B.

- Topsoil and subsoil redistribution and stabilization. C.
- Revegetation (i.e., preparation, seeding, mulching, irrigation). D.

E. Labor.

- F. Safety and fencing.
- Monitoring, and reseeding if necessary.

To assist the Division, the operator may attach a list of costs and factors which would satisfy these areas. Substantiation of these factors, i.e., unit costs and how they are derived, should accompany the list. Cross reference the page number here:

28. A request for a variance from specific commitments to Rule M-10 (Reclamation Standards) of the Mined Land Reclamation Act may be submitted with adequate written justification. If after presentation of information adequately detailing the situation, a determination is made that finds a portion of the rule inapplicable, a variance may be granted by the Division.

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PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides for maintenance of confidentiality concerning certain portions of this report. Please check to see that any information desired to be held confidential is so labeled and included on separate sheets or maps.

Only information relating to the <u>location</u>, size or nature of the <u>deposit</u> may be protected as confidential.

Confidential Information Enclosed: () Yes () No

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I hereby commit the applicant to comply with Rule M-10, "Reclamation Standards" in its entirety, as adopted by the Board of Oil, Gas and Mining on March 22, 1978.

The applicant will achieve the reclamation standards for the following categories as outlined in Rule M-10 on all areas of land affected by this mine, unless a variance is granted in writing by the Division.

Rule	Category of Commitment	Variance Requested?
M-10(1) M-10(2) M-10(3) M-10(4) M-10(5) M-10(6) M-10(7) M-10(8) M-10(9) M-10(10) M-10(11) M-10(12) M-10(13) M-10(14)	Land Use Public Safety and Welfare Impoundments Slopes Highwalls Toxic Materials Roads and Pads Drainages Structures and Equipment Shafts and Portals Sediment Control Revegetation Dams Soils	

I believe a variance is justified on a site-specific basis for the previous subsections of Rule M-10 as indicated. A narrative statement explaining these concerns is attached.

STATE OF Wah
COUNTY OF Summit
depose and attest that all of the representations contained in the foregoing application are true to the best of my knowledge; that I am authorized to complete and file this application on behalf of the Applicant and this application has been executed as required by law.
Signed: arthur forten
Taken, subscribed and sworn to before me the undersigned authority in my said county, this 30 th day of June, 19 87.
Notary Public: Donnie G. Angler
My Commission Expires: 2-27-88

MINE MAPS

- Maps must be clear and legible contour maps or recent aerial photos. The scale should be 1 inch = 500 feet to adequately show topographic features.
- Map sheets should be of a reasonable size, not to exceed 48 inches on a side.
- 3. Maps must have a title block with:
 - A. Map title.
 - B. Name and address of permittee.
 - C. Permit and amendment numbers.
 - D. Annual report period.
 - E. Scale, north arrow, contour interval, date of photography, etc.
- 4. All maps must show:
 - A. Legal subdivisions.
 - B. Permit area boundary clearly shown and labelled.
 - C. Amendment areas clearly shown and labelled.
 - D. Contour features.
- 5. The following features should all be clearly identified:
 - A. Topsoil stockpiles (numbered and with volumes).
 - B. Settling ponds and sediment control structures.
 - C. Haul roads.
 - D. Pits identified by location, name, number, etc.
 - E. Ramps (numbered).
 - F. Out-of-pit spoil dumps.
 - G. All waste disposal sites including, but not limited to:
 - 1. Landfill sites.
 - Carbonaceous waste dumps.
 - H. Diversion ditches.
 - I. Monitoring sites.

14050

Para 5. Owners of record of the surface area within the land to be affected.

Name	Address
Thomas Edward Brown Geraldine B. Ercanbrack Eldon & Juanita Stembridge Utelite Corporation Robert Emmet Walsh	Peoa, Utah 84061 971 E. 125 S., Ogden, Ut. 84400 Peoa, Utah 84061 P.O. Box 387, Coalville, Ut. 84017 6451 South 1040 West Murray, Utah 84123
Lloyd James and Arlene Cibbons	3731 East 3800 South Salt Lake City, Utah 84109

Para 6. Owners of record of the minerals to be mined.

G E U	homas Edward Brown eraldine B. Ercanbrack ldon & Juanita Stembridge telite Corporation obert Emmet Walsh	Peoa, Utah 84061 971 E. 125 S., Ogden, Ut. 84400 Peoa, Utah 84061 P.O. Box 387, Coalville, Ut. 84017 6451 South 1040 West Murray, Utah 84123
G	loyd James and Arlene ibbons ocky Mountain Energy	3731 East 3800 South Salt Lake City, Utah 84109 Denver, Colorado

Para 7. Owners of record of all other minerals, including oil & gas, within any part of the land to be affected.

No other minerals are being mined. No owners other than the ones listed in Para 5 & 6 are involved with the holdings.

Para 8. Yes

Para 9. No

Para 10. 1872 Mining Law and leased claims.

Para 11	. Name	Title	Address
	Fred D. Mortensen	President	P.O. Box 387 Coalville, Utah 84017
	Neal J. Mortensen	Secretary	P.O. Box 1067 Aurora, Utah 84620
	Carsten N. Mortens	en Vice Pres. & General Mgr.	P.O. Box 387 Coalville, Utah 84017

Para 12. No

Para 13. Maps and plans are included in report.

Para 14. Acreage to be disturbed.

A - Minesite (operating, storage, disposal areas)

Attachment to Form MR-1, Utelite Corp. (continued):

1. Mine Pit

1.	Mine Pit 1,600 X 400 = 640,000 divided by 43560 =	Acres 14.7
2.	Waste Area 1,500 X 300 = 450,000 divided by 43560 =	10.4
3.	Plant Site 800 X 400 = 320,000 divided by 43560 =	7.3
4.	Product Storage Area 600 X 250 = 150,000 divided by 43560 =	3.5
	TOTAL	35.9

- Para 15. Describe mining method to be employed.
 - A. The shale deposit does not require the use of explosives for blasting. It does require the use of back rippers.

The pit consists of 3 benches. The upper bench is under development and being stripped for future mining. At the present time the material is being mined from the middle bench.

It is dozed from the middle bench to the lower level. When it becomes uneconomical to push the material, it is then picked up by a front end loader, dumped into a feeder and conveyed to the edge of the bench where it drops into a stockpile on the lower level.

From the lower level the mined shale is picked up by a front end loader and dumped into a feeder. The shale either goes direct to the kilns or can be diverted into a large dome for drying.

The shale passes through the kilns, coolers and conveyed into the aggregate stockpile. The aggregate is then screened and sized for products to be conveyed into loading storage bins for shipment.

- B.
- 1. The shale thickness varies along the strike of the outcrop. The deposit is striking northeast and pinches as it goes southeast. The thickness will range from 200 feet plus to less than 200 feet.
- 2. The deposit is dipping at approximately 40 to 50 degrees to the north on the hanging wall side and 55 to 65 degrees to the north on the footwall side.
- 3. The true extent of the outcrop is not known at this time. However, the surface outcrops and features indicate there is ample reserves to last for several years without an extensive exploration program.
- C. No
- D. The shale is very plastic and not conducive to any water migration.

Attachment to Form MR-1, Utelite Corp. (continued):

Para 16. Yes

Para 17. The duration of the mining operation is dependent upon the sale of the aggregate.

At the present rate of production there is enough reserves developed to provide the plant for at least 7 years of operation.

This would not disturb any additional ground beyond what is shown on the mine plan map.

Para 18. Construction and maintenance of access roads.

The main access road is a county maintained road. The Summit County Landfill is adjacent to the plant. The road is well maintained.

The access roads to the pits are not used for truck haulage. The only purpose for the roads is to get the equipment in and access for the employee's.

The mining is done only when the weather is dry. Therefore, when it is wet any access roads are not used. During the wet weather water guards are dozed into the road to prevent any runoff that may exist.

The operation is near the top of a rounded knoll where the access roads are. Very little runoff ever takes place.

Para 19. Prior Land Uses: Unknown, possible grazing for livestock.

Current Land Use: Summit County Landfill and shale aggregate operation.

Possible Projected or Prospective Land Use: No definite projections can be made for projected land use. The longevity and size of operation is unpredictable.

The open pit offers a very good opportunity to become a future landfill for Summit County. It is Utelites intent to pursue the County for possible consideration to accept the abandoned open pit.

Para 20. Describe methods of tree and brush removal:

Trees and brush removal is dozed along with the overburden into the waste disposal area.

There is no intent to obtain existing vegetation cover.

The types of dominant vegetation covers are, Smooth Brome Grass, Indian Rice Grass, Sagebrush, Bluebunch Wheatgrass and Oak. In the waste areas Canadian Thistle has started to take over.

. . . Attachment to Form MR-1, Utelite Corp. (continued):

Para 21.

- A. PH range of the soil for mining is 6.6 to 8.0. Soil Conservation Service (S.C.S.) Summit County, Utah. Coalville office.
- B. Eight to ten feet. 150,000 cubic yards.
- C. The topsoil and subsoil is dozed over a steep sloping bank. It forms a natural angle of repose.

The stripping of the overburden has not been completed as yet. However, a program has been planned for future stabilization and revegetation.

- D. The overburden is the same as explained in Paragraph C. There is no characteristic changes that we are aware of that would affect revegetation. The company does intend to distribute 200 lbs., per acre of Diammonium Phosphate 18-46-0, when they reseed the waste area.
- E. There is no waste rock that is subjected to any toxics. No additives or chemicals are used in the processing of the material.

Para 22.

- A. There are no shafts, tunnels or drill holes.
- B. The operation is adjacent to the Summit County Landfill. All waste is dumped into retainers and taken to the adjacent landfill. Sewage is handled by a septic tank.
- C. All appropriate warning signs and safety precautions are in place to meet M.S.H.A. regulations.
- Para 23. Grading and Soil Redistribution.

Since the pit is planned for future landfill, no reclamation contours are provided.

It is Utelites plan to recontour the waste dump area, stabilize and reseed this season.

The footwall side of the pit is very stable. This is evident from highwalls that have been standing for several years.

The hanging wall side is along a fault zone and very unstable. This side of the deposit requires a less angle of repose in mining the deposit. Any recontouring on the hanging wall side would disturb more virgin ground than the pit has disturbed.

The spreading of the topsoil will be done with a dozer. The topsoil will be selected and put in piles with a front end loader.

Attachement to Form MR-1, Utelite Corp. (continued):

Para 23. (continued)

The topsoil will be from one foot to two feet in thickness. It will be reseeded and harrowed.

The revegetation will be monitored as the operation will still be on going.

The fertilizer used to aid in revegetation will be 200 lbs., per acre of Diammonium Phosphate 18-46-0.

The additional surface preparation is to doze under the Canadian Thistle while recontouring the waste dump area.

The roads will remain to be used as access for the landfill operation.

Para 24. There is no impounding of water required for processing this material.

> One small pond does exist on the property. This pond is gradually being filled in with clinkers and some waste rock from the plant. Utelite will continue to fill this in until the area is restricted to the natural dimensions to handle the stream flow.

If any erosion takes place rock rip rap will be placed to prevent it.

Para 25.

- A. Carsten N. Mortensen, General Manager.
- B. Yes.

There will be people involved in the operation that can monitor the revegetation. Any cattle or wildlife that disturbs the area will be contained as much as possible from disturbing the revegetated area. Any area that happens to be disturbed will be redone.

- C. No.
- D. The revegetated area will act as a test plot. This will be monitored by the Utelite employee's.
- E. The following species will be used.

Intermediate Wheatgrass	2 lbs.
Indian Ricegrass	2 lbs.
Smooth Bromgrass	8 lbs.
Big Sagebrush	2 lbs.
Blueburch Wheatgrass	2 lbs.
Alfalfa (dry land)	2 lbs.
Rabbit Brush	2 lbs.
TOTAL LBS., PER ACRE	20 lbs.

. TOTAL LBS., PER ACRE

Attachment to Form MR-1, Utelite Corp. (continued):

Para 25. (continued)

The area will be reseeded in the summer of 1987.

One to two feet of topsoil will be placed on the stabilized and contoured area. The seed will be broadcasted and harrowed.

Para 26. The reclamation surrounding the open pit will be done prior to the pit being turned over for landfill.

Para 27. Rule M-5

A. Cleanup and removable of structures.

The plant is comprised of salvable equipment. The buildings which include the office and shop would be an asset for the landfill operation.

The foundations and plant site will eventually be consumed by the landfill.

The foundations can be dozed over and covered up with overburden.

The reclamation for the plant site is as follows.

Cost sources were taken from 1985 editions of the following.

- 1. Rental rate blue book.
- 2. Cost standards for cost estimating.
- 3. Mean site work cost data.

Rule M-5 Surety Guarantee Reclamation Cost Estimate.

General Cleanup Regrading, Contouring and Coveri	\$ Da	200.00
Foundations, 24 hrs @ \$125/hr. Fuel & Maintenance, 24 hrs. @ \$ Operator, 24 hrs @ \$29.25/hr. =	= 28/hr. =	3,840.00 672.00 702.00
10% contingency		5,214.00 521.00
TOTAL	\$	5,735.00